



Overview and Summary of Recent Initiatives

The biosciences are targeted as a key sector by the Illinois Department of Commerce and Economic Opportunity, which funds a series of regionally based **Illinois Technology Enterprise Centers (ITECs)** charged to develop early-stage businesses. Since the last BIO report, Illinois added state resources to the pre-seed fund operated by an affiliate of the University of Illinois, and Governor Rod Blagojevich ordered the Department of Public Health to commit \$10 million to a re-grant program for stem cell research, including embryonic. In addition, a new private sector bioscience park was announced for a former Pfizer campus in Skokie.

Building Bioscience R&D Capacity

Recent state investments in facilities

Construction is complete on nearly all the facilities financed under the state's VentureTECH capital program of 2000. Final construction and faculty recruitment are under way for the 186,000-square-foot, \$75 million **Institute for Genomic Biology** at the University of Illinois at Urbana-Champaign (UIUC). Projects that are now open or nearly finished include new **Biomedical Research Buildings** at the University of Illinois Chicago (UIC), Northwestern Medical School in Chicago, Illinois Institute of Technology (IIT), and Loyola University. Other funded facilities include a cancer institute at Southern Illinois University (SIU) in Springfield, chemistry at UIC, and nanotechnology at UIUC. Construction has not yet begun on a Regional Biocontainment Laboratory planned for the campus of Argonne National Laboratory, managed by the University of Chicago.

Research programs

Illinois Board of Higher Education annually provides **Matching Grants** to institutions of higher education leveraging federal funding. The most recent round awarded \$9.6 million to 18 institutions across multiple fields.

Moving Technology into the Marketplace

Supporting bioscience entrepreneurs and emerging companies

Additional commercialization support will be available from the **Illinois Technology Development Alliance**, which in 2005 spun out of the Illinois Coalition and will be funded mainly by federal grants and contracts.

Making Capital Available

Pre-seed and seed capital

Illinois provides \$3 million to support eight regionally based **ITECs**. These are equipped to make very early pre-seed investments (about \$20,000 each) in technology-based companies for pre-commercialization activities. The Chicago ITEC is partnered with Illinois Ventures (see below), a unit of the University of Illinois. The ITECs serve start-ups whether or not affiliated with universities.

Bio-Angels, of Lake Bluff, is a network of angel investors seeking to place up to \$1 million in bioscience deals. The Chicago branch of **Keiretsu Forum** also considers bioscience deals.

The **Illinois Finance Authority** makes **Technology Development Bridge** investments of between \$150,000 and \$300,000 in early-stage companies across multiple fields, but only when it can invest side-by-side with accredited angel investors or formal venture capital funds.

Early-stage investments are available from the **Illinois Emerging Technology Fund**, whose general partner is **Illinois Ventures**, a commercialization company owned by the University of Illinois. Currently, the fund's limited partners are wealthy individuals from the region's corporate community, but they will be joined by a \$7.5 million investment from the state Treasurer's office (see below). To date, the fund has invested \$4 million in six companies, two of which are in the biosciences.

Privately financed **Flavin Ventures** targets seed-stage investments up to \$1 million in rounds under \$5 million in bioscience companies emerging from Midwestern research institutions.

Venture capital

The Treasurer's investment in the Illinois Emerging Technology Fund comes from a \$50 million pool first created 3 years ago. The Treasurer has stated a preference for investments in venture funds that have a track record in Illinois as well as favorable return characteristics. Of the three initial investments, the venture fund that does bioscience deals is **Beecken Petty O'Keefe & Company**, a buyout firm. The Treasurer plans to continue placing funds over the next several years.

Separately from the Treasurer's program, the state's pension funds are authorized to invest up to 1 percent in venture capital funds with significant exposure to Illinois deals.

Providing Space for Bioscience Companies

Incubators

Bioscience incubators include the following:

- **Research Center**, a 57,000-square-foot wet-lab incubator at Chicago Tech Park (see below), which is surrounded by several multitenant facilities including some with wet labs
- **Technology Works** at the UIUC Research Park (see below), a 53,000-square-foot incubator over two buildings, with 36 laboratory modules

- **Incubator** at IIT University Technology Park (below), currently 6,000 square feet collocated with IIT's biomedical engineering research laboratories, to be expanded by 24,000 square feet in 2006 to 2007.

In Belvidere, in Boone County near Northern Illinois University, there is an early-stage effort to develop a 50,000-square-foot **New Uses Ag-Tech** incubator facility in partnership with the university's New Uses Entrepreneurial Development Center.

Bioscience research parks

Illinois has a number of research parks seeking bioscience tenancy. The oldest and best established is **Chicago Tech Park**, a 56-acre zone within the 560-acre **Illinois Medical District**, which is governed by a state-chartered commission involving the county, city, and several academic medical centers with assets in the district. The district has a range of facilities for incubation, graduation space, and single-tenant facilities. It has just acquired general-obligation bonding authorization that will allow it to redevelop a long-vacant site across the street from the institutional core of hospitals and medical schools.

A second park with bioscience tenancy is the **Research Park at the University of Illinois**, which is being developed on 230 acres just south of the Champaign-Urbana campus. Currently, there are 324,000 square feet over five buildings, and of 17 tenants several are bioscience oriented. **University Park at SIU Edwardsville**, on 330 acres, includes a federally funded National Corn to Ethanol Research Center and is considered part of the plant and life sciences strategy of the metropolitan St. Louis region.

Additional parks under earlier stages of development include the following:

- **University Technology Park at IIT**, a 15-acre park on the South Side of Chicago which is anchored by the Life Sciences Group of IIT Research Institute, an applied research laboratory and contract research organization owned by the institute. A 130,000-square-foot build-to-suit laboratory/office building is due to open this summer. The park will ultimately include nine laboratory and office buildings including an incubator (see above) and four build-to-suit commercial buildings.
- **Illinois Medical District at Springfield (IMDS)** is modeled directly on the Illinois Medical District in Chicago and will be anchored by the SIU School of Medicine and two tertiary-care teaching hospitals. Occupying one square mile immediately north of downtown Springfield, and a portion of a previously designated tax increment financing (TIF) district, IMDS received approval for its master plan but is at an earlier stage of planning than either of the parks in Chicago or Champaign-Urbana.
- Since the last BIO report, **Illinois Science + Technology Park**, owned by Forest City Enterprises, began marketing space at a 28-acre former Pfizer campus in the Chicago suburb of Skokie. The park, which will ultimately be 2 million square feet, received \$10 million in TIF and \$1 million in state funding. The developer is targeting both university and corporate uses.

Addressing Talent Needs

Recruiting management talent

The Center for Entrepreneurial Development at UIUC uses MBA students for consulting projects at companies in its incubator and across the ITECs for which the University of Illinois is responsible.

Specialized postsecondary programs

Chicago Tech Park operates **BiTmaP**, a tuition-free program to retrain underemployed IT workers for careers in bioinformatics. Working through instructors at UIC, the program offers three courses and an industry internship and can be completed in 1 year. It is supported by a \$3 million grant from the U.S. Department of Labor.

K-12 outreach programs

iBIO, the state's bioscience trade association, organized and provided initial funding for the **Midwest Health and Life Sciences Foundation** to develop bioscience curricula for K-12 and community colleges and workforce training programs. The City of Chicago and State of Illinois have provided \$170,000 in grants over the past 2 years.

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iBIO is a life-sciences industry association comprising international agricultural and human-health companies, small and medium-sized companies, entrepreneurial leaders of start-ups and spinouts, scientists and technology transfer specialists, investors, economic developers, service providers, and other business professionals. Its mission is to secure for the Midwest Region recognition as one of the world's great life sciences centers.

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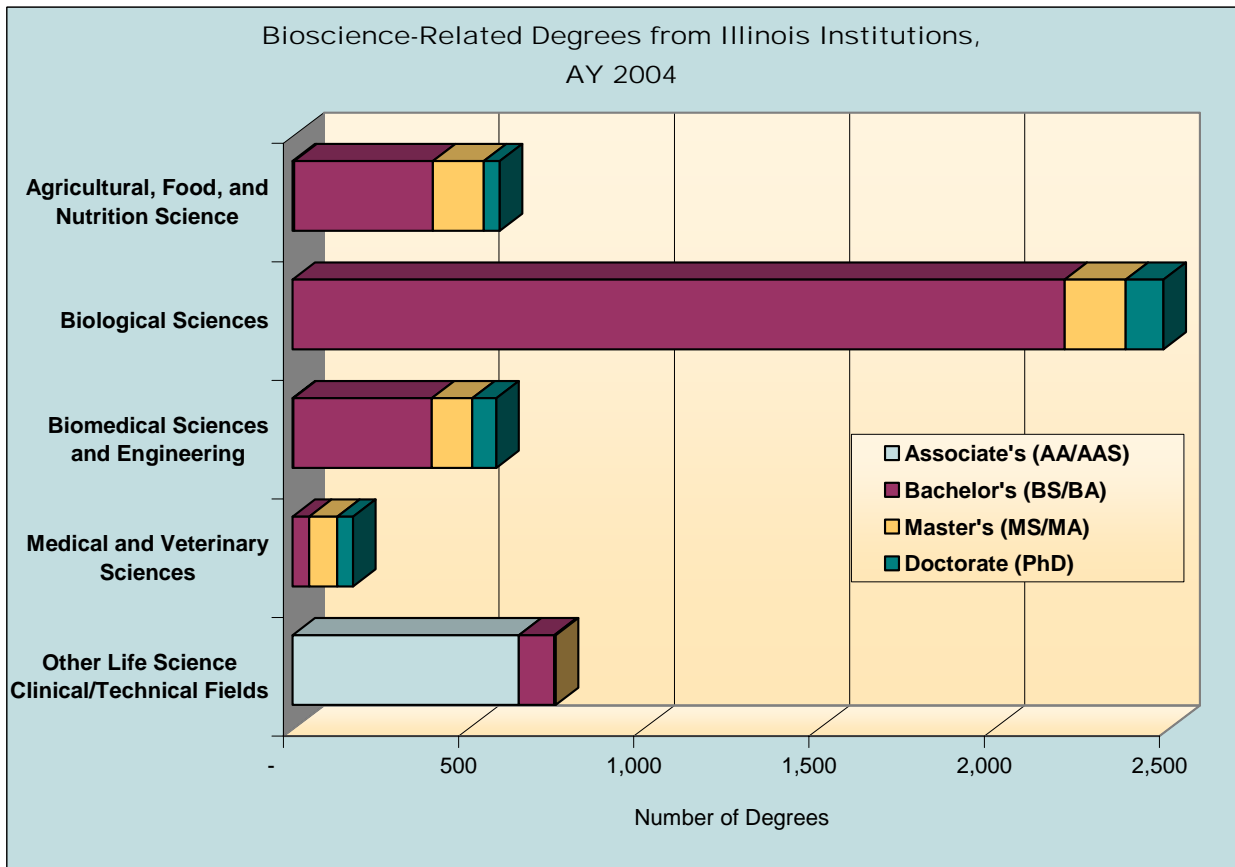
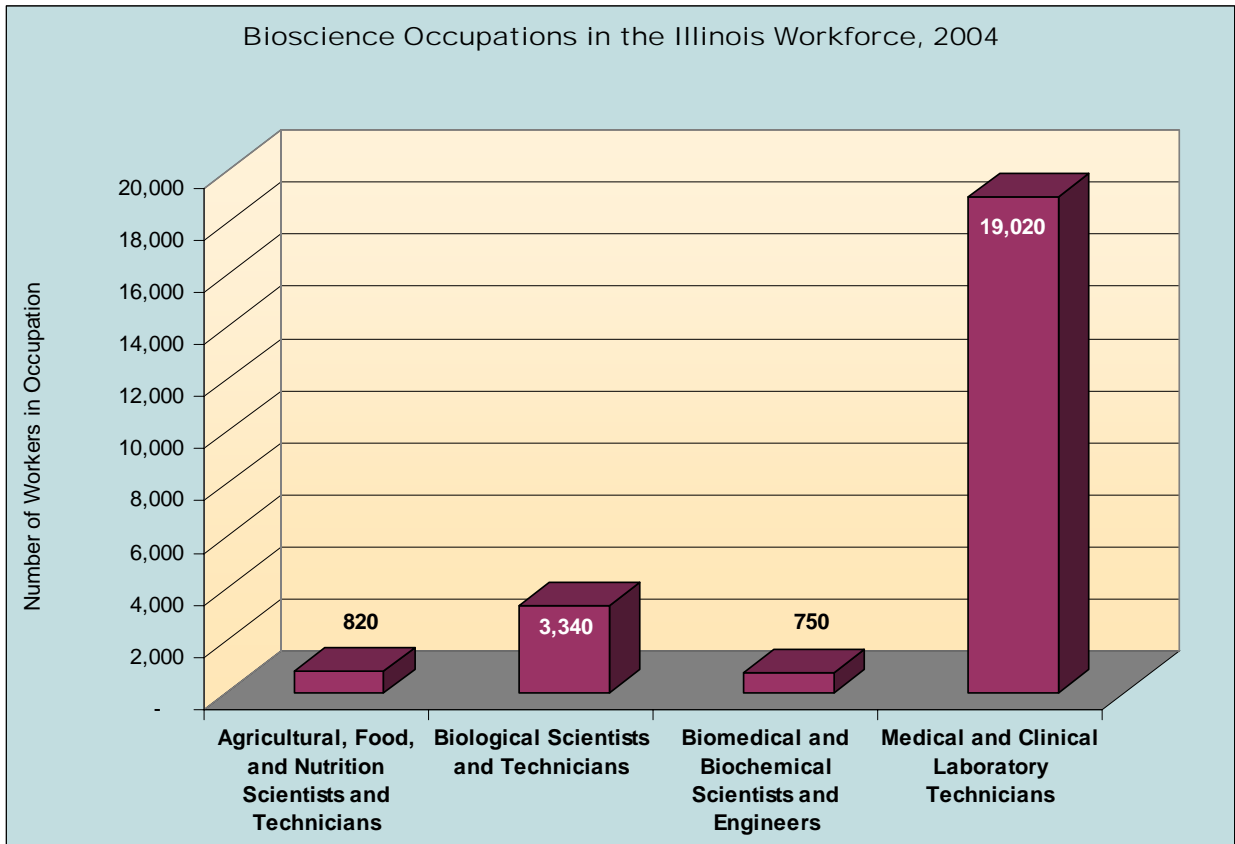
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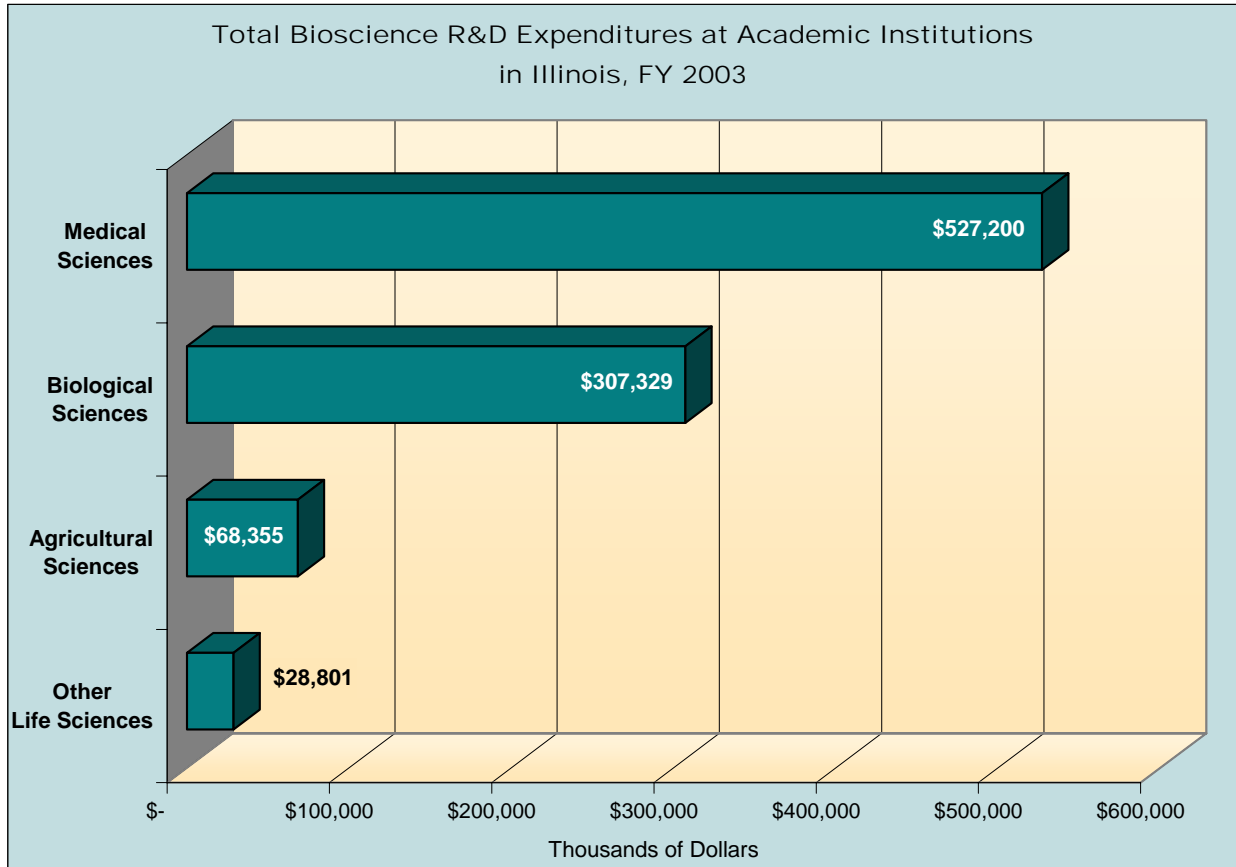
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Industry Subsector	Illinois	United States
Agricultural Feedstock & Chemicals		
Establishments 2004	96	2,111
2001-2004 Establishment % Change	12.7%	0.4%
Employment 2004	9,687	104,893
2001-2004 Employment % Change	5.7%	-6.9%
Share of U.S. Employment	9.2%	100.0%
Location Quotient	2.06	n.a.
Average Annual Wage 2004	\$62,690	\$63,383
Direct-Effect Employment Multiplier	9.39	10.91
Total Employment Impact	90,944	1,212,094
Drugs & Pharmaceuticals		
Establishments 2004	114	2,589
2001-2004 Establishment % Change	-8.8%	-0.6%
Employment 2004	20,597	313,207
2001-2004 Employment % Change	1.6%	2.7%
Share of U.S. Employment	6.6%	100.0%
Location Quotient	1.47	n.a.
Average Annual Wage 2004	\$81,021	\$79,303
Direct-Effect Employment Multiplier	7.19	9.51
Total Employment Impact	148,101	2,731,321
Medical Devices & Equipment		
Establishments 2004	704	15,190
2001-2004 Establishment % Change	2.6%	0.2%
Employment 2004	13,154	411,460
2001-2004 Employment % Change	-5.8%	-3.6%
Share of U.S. Employment	3.2%	100.0%
Location Quotient	0.71	n.a.
Average Annual Wage 2004	\$60,253	\$56,449
Direct-Effect Employment Multiplier	3.32	4.56
Total Employment Impact	43,686	1,817,705
Research, Testing, & Medical Laboratories		
Establishments 2004	721	20,565
2001-2004 Establishment % Change	19.6%	19.4%
Employment 2004	13,413	413,550
2001-2004 Employment % Change	-15.7%	8.2%
Share of U.S. Employment	3.2%	100.0%
Location Quotient	0.72	n.a.
Average Annual Wage 2004	\$73,433	\$65,414
Direct-Effect Employment Multiplier	2.50	3.15
Total Employment Impact	33,577	1,272,936
TOTAL PRIVATE SECTOR		
Establishments 2004	320,092	8,156,137
2001-2004 Establishment % Change	2.7%	4.8%
Employment 2004	4,895,931	109,249,195
2001-2004 Employment % Change	-3.6%	-0.7%
Share of U.S. Employment	4.5%	100.0%
Location Quotient	n.a.	n.a.
Average Annual Wage 2004	\$42,321	\$39,003

Source: Battelle calculations -- based on Bureau of Labor Statistics QCEW data from the Minnesota Implan Group, RIMS II Employment Multipliers from the Bureau of Economic Analysis, and the Census Bureau's Economic Census.

Note: n.a. = metric is not applicable.





	Illinois	United States	Rank
University R&D Expenditures, FY 2003			
Total (\$ thousands)	\$1,613,691	\$40,104,621	7
Life Science R&D (\$ thousands)	\$944,488	\$24,062,088	7
Percent of Total R&D	58.5%	60.0%	
Life Sciences Per Capita	\$74.64	\$82.74	
Change in Life Sciences FY 1999–2003	58.7%	52.7%	
NIH Support to Institutions, FY 2004			
Total (\$ thousands)	\$689,659	\$22,556,459	10
Per Capita Expenditures	\$54.50	\$77.56	
Change in Expenditures FY 2000–2004	45.8%	53.2%	
Higher Education Degrees in Bioscience Fields, AY 2004			
	4,585	111,329	5
Bioscience Occupations in the Workforce, 2004			
	23,930	616,140	7